

By



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,703	02/24/2004	Sang-Hyuk Im	IK-0076	1474
34610	7590	11/07/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			VU, MICHAEL T	
			ART UNIT	PAPER NUMBER
			2683	

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/784,703		IM ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Michael Vu		2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>06/24/2005</u> .  | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

*Regarding claims 1, 8, 13, 14, and 22 are not indicated on the drawing of "a third position where both the first and second key sections are not exposed". The phrase "third positions". This is not supported in the Specification. How?*

***\*\*No new matter can be added to the Specification\*\****

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 5, 7-9, 19, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee (US 2005/0070348).

Regarding **claim 1**, Lee teaches a slide type portable terminal (Title, Abstract, Fig. 2), comprising: a main unit that includes separated first and second key sections exposed in a surface of the main unit (Fig. 2, the held-hand communication electronic apparatus 1 shows separated first and second key sections exposed); and a display unit that includes a display screen exposed to a front surface of the display unit (display

screen, element 111), wherein the display unit is configured to slide relative to the surface of the main unit to cause the first and second key sections of the main unit to be selectively exposed (Fig. 2, the held-hand communication electronic apparatus 1 shows separated first and second key sections exposed), wherein the display unit can be selectively slid to a first position where both the first and second key sections of the main unit are exposed (Fig. 2, [0013-0014]), a second position where only one of the key sections is exposed (Fig. 2, [0013-0014]) and a third position where both the first and second key sections are not exposed (Fig. 1, shows a third position where both the first and second key sections are not exposed [0013-0014]).

Regarding **claim 2**, Lee teaches a slide type portable terminal of claim 1, comprising a stopper mechanism configured to allow the display unit to be stopped at the second position where said only one of the key sections is exposed (Fig. 2, [0013-0014]).

Regarding **claim 5**, Lee teaches a slide type portable terminal of claim 4, wherein corresponding sliding structures configured to perform sliding operations of the main unit and the display unit are provided on opposite lateral ends of the main unit and the display unit (Fig. 2, [0014]).

Regarding **claim 7**, Lee teaches a slide type portable terminal of claim 6, comprising a third separate input section being function buttons on an upper surface of the display unit (Fig. 1, element 112 buttons/keys [0013 to 0014]).

Regarding **claim 8**, Lee teaches a portable terminal, comprising: a main unit that includes first and second key sections separately accessible to a surface of the main

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unit (Fig. 2, [0004 to 0006]); and a display unit that includes a display screen (Fig. 2, [0004 to 0006]), wherein the display unit is configured to selectively move relative to the surface of the main unit between a first position where both the first and second key sections of the main unit are not accessible (Fig. 1 and Fig. 2), a second position where only one of the key sections is accessible (Fig. 2, 0013, 0014)), and a third position where both the first and second key sections are accessible (Fig. 2, [0013, 0014]).

Regarding **claim 9**, Lee teaches a portable terminal of claim 8, wherein the display unit is configured to slide relative to the surface of the main unit (Fig. 2, [0013, 0014]).

Regarding **claim 19**, Lee teaches a method, comprising: sliding a display unit of a portable terminal to a first position where both first and second separated key sections of a main unit of the portable terminal are exposed in an upper surface of the main unit (Fig. 2, [0013-0014]); sliding the display unit to a second position where only one of the key sections is exposed (Fig. 2, [0013-0014]); and sliding the display unit to a third position where both the first and second key sections are covered (Fig. 1, [0013-0014]).

Regarding **claim 22**, Lee teaches a system including a slide type portable terminal with a first unit having first and second pluralities of keys (Fig 1, and Fig. 2) and slidably coupled to a second unit (Fig 1, and Fig. 2), comprising: a stopping mechanism coupled to the first and second units and configured to stop the first and second units in a first position where both the first and second key sections of the first unit are exposed, a second position where only one of the key sections is exposed, and a third position

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where both the first and second key sections are not exposed (Fig 1, and Fig. 2, [0013-0014]).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 3-4, 6, 11-14, 16-18, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2005/0070348) in view of Kim (US 2001/0009847).

Regarding **claim 3**, Lee teaches a slide type portable terminal of claim 2, wherein the stopper mechanism includes a stopper groove affixed to one of the display unit and the main unit, **but is silent on** and a stopper spring coupled to the other one of the units

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to correspond to the stopper groove, wherein the stopper spring is selectively seated in the stopper groove. However, Kim teaches a drawer-type mobile phone includes having a panel form so as for both margins to be moved along both side faces of the main body; the mechanic binding member includes a hooking protrusion formed at a predetermined portion of the side face inside the drawer cover, a press button having a support bar mounted at the side of the main body and extended inwardly of the main body, a fixing support for supporting the front end of the support bar, a hooking piece mounted at the support bar for hooking the hooking protrusion in a closed state, and a twisted spring mounted at the support bar for applying an elastic force to one side of the hooking piece (Fig. 11 and Fig. 12, [0080, 0082]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that a stopper spring coupled to the other one of the units to correspond to the stopper groove, wherein the stopper spring is selectively seated in the stopper groove, to provide the flexibility to slide/move/stop the two separated sections selectively open or close.

Regarding **claim 4**, Lee teaches a slide type portable terminal of claim 1, **but is silent on** wherein first and second magnets are correspondingly arranged on the main unit and the display unit, respectively, so that the same poles of the magnets face each other to provide a repulsive force when they are positioned to face close to each other. However, Kim teaches a drawer-type mobile phone includes having a panel form so as for both margins to be moved along both side faces of the main body; The binding member of the operating unit can be divided into two types according to a structural

principle; one is a mechanic binding member using a mechanical binding structure, and the other is a magnetic binding member using a magnetic force (Fig. 11 to 15, [0024, 0025, 0080, 0082, 0085, 0088]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that wherein first and second magnets are correspondingly arranged on the main unit and the display unit, respectively, so that the same poles of the magnets face each other to provide a repulsive force when they are positioned to face close to each other, to support the first and the second sliding plates.

Regarding **claim 6**, Lee teaches a slide type portable terminal of claim 1, wherein the separated first and second key sections are a number key section and a function key section that **but is silent on** includes a microphone respectively. However, Kim teaches the drawer-type mobile phone of his invention has a structural characteristic that the distance between the microphone and the speaker [0005, 0006, 0017, 0114].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that includes a microphone respectively, to provide a distance between the mouth and the ear, when the drawer cover is opened, and since the opening and closing operation of the drawer cover is simply manipulated by one touch, it is very convenient to use.

Regarding **claim 10**, Lee teaches a slide type portable terminal comprising: a main unit including separated first and second key sections and a first plate on a surface of the main unit (Fig. 2); a display unit that includes a display screen on a front



surface of the display unit and a second plate slidably coupled to the first plate so that the first and second key sections of the main unit are selectively covered and exposed (Fig. 1, and Fig. 2); **but is silent on** first and second magnets on the first and second plates, respectively, so that the same poles of the magnets face each other to provide a repulsive force when they are positioned to face close to each other.

However, Kim teaches a drawer-type mobile phone includes having a panel form so as for both margins to be moved along both side faces of the main body; The binding member of the operating unit can be divided into two types according to a structural principle; one is a mechanic binding member using a mechanical binding structure, and the other is a magnetic binding member using a magnetic force (Fig. 11 to 15, [0024, 0025, 0080, 0082, 0085, 0088]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that first and second magnets on the first and second plates, respectively, so that the same poles of the magnets face each other to provide a repulsive force when they are positioned to face close to each other, to support the first and the second sliding plates.

Regarding **claim 11**, Lee teaches a slide type portable terminal of claim 10, further teaches wherein the display unit can be selectively slid to a first position where both the first and second key sections of the main unit are exposed (Fig. 2), a second position where only one of the key sections is exposed (Fig. 2), and a third position where both the first and second key sections are covered (Fig. 1).

Regarding **claim 12**, Lee teaches a slide type portable terminal of claim 11, further teaches wherein the first and second magnets cross over each other during movement between the first and second positions (Fig. 1 and Fig. 2 show the first and second magnets cross over each other during movement between the first and second positions).

Regarding **claim 13**, Lee teaches a slide type portable terminal of claim 12, **but is silent on** wherein a stopper mechanism includes a stopper groove that is on one of the first and second plates, and a plurality of stopper springs on the other one of the plates, wherein one of the plurality of stopper springs is removably seated in the stopper groove in each of the first, second and third positions. However, Kim teaches a drawer-type mobile phone includes having a panel form so as for both margins to be moved along both side faces of the main body; the mechanic binding member includes a hooking protrusion formed at a predetermined portion of the side face inside the drawer cover, a press button having a support bar mounted at the side of the main body and extended inwardly of the main body, a fixing support for supporting the front end of the support bar, a hooking piece mounted at the support bar for hooking the hooking protrusion in a closed state, and a twisted spring mounted at the support bar for applying an elastic force to one side of the hooking piece (Fig. 11 and Fig. 12, [0080, 0082]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that wherein a stopper mechanism includes a stopper groove that is on one of the first and second plates, and a plurality of

stopper springs on the other one of the plates, wherein one of the plurality of stopper springs is removably seated in the stopper groove in each of the first, second and third positions, to provide the flexibility to slide/move/stop the two separated sections selectively open or close.

Regarding **claim 14**, Lee teaches a slide type portable terminal of claim 11, further teaches wherein the first and second magnets cross over each other during movement between the second and third positions (Fig. 1, [0013-0014]).

Regarding **claim 16**, Lee teaches a slide type portable terminal of claim 10, further teaches comprising a stopper mechanism configured to temporarily fix the display unit to be stopped at a position where one of the key sections is exposed (Fig. 1 and Fig. 2 [0013-0014]).

Regarding **claim 17**, Lee teaches a slide type portable terminal of claim 16, **but is silent on** wherein the stopper mechanism includes a stopper groove that is on one of the first and second plates, and a stopper spring on the other one of the plates to correspond to the stopper groove, wherein the stopper spring is removably seated in the stopper groove. However, Kim teaches a drawer-type mobile phone includes having a panel form so as for both margins to be moved along both side faces of the main body; the mechanic binding member includes a hooking protrusion formed at a predetermined portion of the side face inside the drawer cover, a press button having a support bar mounted at the side of the main body and extended inwardly of the main body, a fixing support for supporting the front end of the support bar, a hooking piece mounted at the support bar for hooking the hooking protrusion in a closed state, and a twisted spring

mounted at the support bar for applying an elastic force to one side of the hooking piece (Fig. 11 and Fig. 12, [0080, 0082]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that wherein the stopper mechanism includes a stopper groove that is on one of the first and second plates, and a stopper spring on the other one of the plates to correspond to the stopper groove, wherein the stopper spring is removably seated in the stopper groove, to provide the flexibility to slide/move/stop the two separated sections selectively open or close.

Regarding **claim 18**, Lee teaches a slide type portable terminal of claim 10, comprising a third separate key section being function keys on an upper surface of the display unit, wherein the separated first and second key sections are a number key section and a multi-media key section (Fig. 1, [0013-0014]) **but is silent on** that includes a microphone, respectively. However, Kim teaches a phone has a microphone or speaker mounted at the upper inner surface of the drawer cover, being connected with an audio amplifier of the main body through a connection member (Abstract, Fig. 2b, element M, [0005, 0017]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that that includes a microphone, respectively, to provide a convenient/cost for users to use it.

Regarding **claim 20**, Lee teaches a method of claim 19, **but is silent on** wherein magnetic force assists movement between the first and second positions and between the second and third positions. However, Kim teaches the binding member of the

operating unit can be divided into two types according to a structural principle; one is a mechanic binding member using a mechanical binding structure, and the other is a magnetic binding member using a magnetic force (Fig. 7, [0080, 0106]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that wherein magnetic force assists movement between the first and second positions and between the second and third positions, to provide the drawer covers are more stably maintained.

Regarding **claim 21**, Lee teaches a method of claim 20, **but is silent on** comprising providing a resistive locking member between the display unit and the main unit, wherein the resistive locking member has an engaging member and an engagement member that retractably engage at least when the display unit is in the second position. However, Kim teaches a mechanic force or a motion-restraining member for restraining the drawer cover from releasing from the main body when the drawer cover is open [0019-0021].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that comprising providing a resistive locking member between the display unit and the main unit, wherein the resistive locking member has an engaging member and an engagement member that retractably engage at least when the display unit is in the second position, to provide the drawer covers are more stably maintained.

7. Claim 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 2005/0070348) in view of King (US 2004/0067768).

Regarding **claim 15**, Lee teaches a slide type portable terminal of claim 10, comprising a touch screen input device removably attached to the portable terminal, wherein the display screen is a touch screen. However, King teaches a touch screen element positioned on a first body portion; a plurality of user interface actuator keys positioned on the first body portion below the touch screen element; and a display responsive to the touch screen user interface and positioned on a second body portion, the second body portion being movable between a closed position and an open position (Abstract, Fig. 5 to 36 [0097, 0099]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee, such that a touch screen input device removably attached to the portable terminal, wherein the display screen is a touch screen, to provide a convenient/save time for users to operate.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee US 2005/0070348

Kim US 2001/0009847

King US 2004/0067768

Kato US 2005/0119034

Chang US 2005/0096082

Tsai US 2004/0198246

Ben-Efraim US 2004/0204116

Norman US 6,073,027

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Vu whose telephone number is (571) 272-8131. The examiner can normally be reached on 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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